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ABSTRACT

This scale, "The Accessibility of Campus Computers: Disability Services Scale," provides postsecondary education institutions with a self-evaluation tool that will help determine how accessible their computer and learning technologies are to students with disabilities. It evaluates a range of situations such as: whether there are computers with adaptive technologies (e.g., software that reads what is on the screen, adaptive mouse) in general use in computer labs; whether personnel who provide services to students with disabilities on campus are consulted when computer infrastructure decisions are made; and whether computer-based learning materials (e.g., course Web pages) used by faculty meet accessibility guidelines. The measure consists of 21 6-point Likert-scaled items grouped into 5 empirically derived subscales: (1) Access to Adaptive Computers; (2) Infrastructure and Collaboration; (3) Academic Inclusion; (4) Adaptive Technology; and (5) Rehabilitation Sector Support. Information is also provided on norms, standardization, and availability (including Web sites). Both the English and French versions are included. (DB)

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Accessibility of Campus Computers: Disability Services Scale (ACCdss) v.1.0

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Purpose

The purpose of the Accessibility of Campus Computers: Disability Services Scale (ACCdss) is to provide postsecondary education institutions a self-evaluation tool that will help determine how accessible their computer and learning technologies are to students with disabilities. Here, accessibility refers to a range of situations such as: whether there are computers with adaptive technologies (e.g., software that reads what is on the screen, adaptive mouse) in general use computer labs, whether personnel who provide services to students with disabilities on campus are consulted when computer infrastructure decisions are made, and whether computer-based learning materials (e.g., course web pages) used by faculty meet accessibility guidelines.

Potential uses of the scale include: evaluation of one's own institution, measuring progress, item-by-item assessment, comparison with similar institutions, basis for policy documents, basis for institutional changes, basis for evaluation of one's instructional technology plans, and basis for budget allocation.

Description

The measure consists of 21 6-point Likert scaled items grouped into five empirically derived subscales. Subscales were derived through factor analysis and represent five different accessibility issues:

- Access to Adaptive Computers (six items)
- Infrastructure and Collaboration (five items)
- Academic Inclusion (five items)
- Adaptive Technology Competence (three items)
- Rehabilitation Sector Support (two items)

Norms and Standardization

Means and standard deviations for the scale are based on a 38 item structured telephone interview conducted during 2000 with 153 campus based personnel who provide services to Canadian postsecondary students with disabilities. This represents an 80% response rate (Fichten, Barile, Asuncion, Fossey, Robillard, Judd, Guimont, & Tam, 2001).

The findings indicate that these 5 factors account for 56% of the variability and are moderately correlated to one another (range r = .15 to r = .58). Cronbach's alpha ranges from .63 to .85 for the subscales, an indicator of good internal consistency. In addition, there is good internal consistency for the full scale (alpha = .89).

When measured against the criterion variable *"Overall, the computer and/or adaptive computer technology needs of students with disabilities at my institution are adequately met,"* a good relationship was found both between the criterion and both subscale as well as full scale scores (r = .55).

ACCdss	Mean	Standard Deviation
Subscales		
Rehabilitation Sector Support	3.82	1.30
Access To Adaptive Computers	3.77	1.22
Adaptive Technology Competence	3.33	1.32
Infrastructure And Collaboration	3.02	1.13
Academic Inclusion	2.96	1.13
Total Scale Score	3.31	0.83

EC 309039

Availability

Fossey, M.E., Fichten, C.S., Robillard, C., & Asuncion, J.V. (2001). **Accessibility of Campus Computers: Disability Services Scale (ACCdss) v1.0** (Scale). Available August 20, 2001

in English
http://www.adaptech.org/pubs/accdsse.doc, or
http://www.adaptech.org/pubs/accdsse.pdf, or
http://www.adaptech.org/pubs/accdsse.txt,

and in French
http://www.adaptech.org/pubs/accdssf.doc, or
http://www.adaptech.org/pubs/accdssf.pdf, or
http://www.adaptech.org/pubs/accdssf.txt

References

Fichten, C.S., Barile, M., Asuncion, J.V., Fossey, M.E., Robillard, C., Judd, D., Guimont, J.P., & Tam, R. (2001). Computer and information technologies: Resources for the postsecondary education of students with disabilities - Final report to the Office of Learning Technologies. Retrieved August 31, 2001 from www.adaptech.org/pubs/oltfin01.pdf

Copies of the scale are also available by contacting one of the authors at:

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ACCESSIBILITY OF CAMPUS COMPUTERS: DISABILITY SERVICES SCALE (ACCDss) V.1

For all questions, rate your level of agreement using the following scale:

1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Moderately Agree, 6 = Strongly Agree

Do not spend too much time on any one statement. Simply give the answer which best describes the general situation. If an item is not applicable to your institution, respond with "N/A", not applicable.

1. ____ At my institution, computer and/or adaptive computer technologies are sufficiently up-to-date to meet the needs of students with disabilities
2. ____ At my institution, the hours of access to adaptive computer technologies meet the needs of students with disabilities
3. ____ At my institution, there are enough computers with internet access that also have adaptive hardware/software on them to meet the needs of students with disabilities
4. ____ The technical support at my institution for students using adaptive computer technologies meets the needs of students with disabilities
5. ____ The availability of adaptive computer technologies in specialized labs/centres for students with disabilities at my institution meets their needs
6. ____ The training provided by my institution on adaptive computer technologies for students with disabilities meets their needs

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7. ____ The physical space available for adaptive computer technologies at my institution meets the needs of students with disabilities
8. ____ I am (my office/service is) consulted when major campus-wide computer infrastructure decisions are made (e.g., purchasing institution-wide software, web design, adding or improving computer labs)
9. ____ My institution has an advisory/steering committee which deals with the accessibility of computer technologies for students with disabilities
10. ____ The administration reacts positively when I approach them with problems related to the accessibility of computers on campus for students with disabilities
11. ____ Personnel who take care of mainstream computers on campus have the expertise to deal with adaptive computer technologies

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12. ____ The funding for my institution's computer and/or adaptive computer technologies (from my institution, government, programs, agencies, foundations, companies) meets the needs of students with disabilities
13. ____ The availability of adaptive computer technologies in mainstream computer labs at my institution meets the needs of students with disabilities
14. ____ The accessibility of computer-based teaching materials used by professors (e.g., math software, CD-ROMs, web pages) meets the needs of students with disabilities
15. ____ The accessibility of the library's computers (e.g., computerized catalogues, databases, CD-ROMs) meets the needs of students with disabilities
16. ____ Accessibility issues are covered when faculty are trained in how to use computer technologies in their courses

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17. ____ There are opportunities for employees of my institution to learn about adaptive computer technologies
18. ____ There is a person at my institution who has expertise in adaptive computer technologies (i.e., someone who is knowledgeable, keeps up-to-date with new products, and fixes hardware and software problems)
19. ____ I am knowledgeable about adaptive computer technologies (e.g., software that enlarges what is on the screen, adapted mouse)

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20. ____ I have the sense that rehabilitation centres, programs, agencies, or companies that supply computer and/or adaptive computer technologies to students with disabilities provide appropriate software/hardware
21. ____ I have the sense that students with disabilities have received adequate training in using computer and/or adaptive computer technologies from rehabilitation centres, programs, agencies, companies, etc.

_____ **TOTAL SCALE SCORE** Average all scores for items 1 through 21

Subscales

_____ **Access To Adaptive Computers Subscale Scoring** Average scores from items 1, 2, 3, 4, 5 and, 6

_____ **Infrastructure And Collaboration Subscale Scoring** Average scores from items 7, 8, 9, 10 and, 11

_____ **Academic Inclusion Subscale Scoring** Average scores from items 12, 13, 14, 15 and, 16

_____ **Adaptive Technology Competence Subscale Scoring** Average scores from items 17, 18 and, 19

_____ **Rehabilitation Sector Support Subscale Scoring** Average scores from items 20 and 21

Citation: Fossey, M.E., Fichten, C.S., Robillard, C., & Asuncion, J. (2001). **Accessibility of Campus Computers: Disability Services Scale (ACCdss) V.1.** (Scale). Available August 20, 2001 in English from: http://www.adaptech.org/pubs/accdsse.doc, or http://www.adaptech.org/pubs/accdsse.pdf, or http://www.adaptech.org/pubs/accdsse.txt

ACCESSIBILITÉ DES TECHNOLOGIES AU CAMPUS: ÉCHELLE DES SERVICES POUR ÉTUDIANTS HANDICAPÉS V.1

Pour toutes les questions, évaluez dans quelle mesure vous êtes d'accord avec les affirmations en utilisant une échelle à 6 points où :

1 = Fortement en désaccord, 2 = Assez en désaccord, 3 = Un peu en désaccord,
4 = Un peu d'accord, 5 = Assez d'accord, 6 = Fortement d'accord

Ne passez pas trop de temps sur les affirmations. Donnez plutôt une réponse décrivant le mieux la situation en général. Si un item ne s'applique pas à votre établissement, répondez par «N/A» ne s'applique pas.

1. ___ Dans mon établissement d'enseignement, les technologies informatiques et/ou technologies informatiques adaptatives sont suffisamment à jour pour répondre aux besoins des étudiants ayant des incapacités
2. ___ Dans mon établissement d'enseignement, les heures d'accès aux technologies informatiques adaptatives répondent aux besoins des étudiants ayant des incapacités
3. ___ Dans mon établissement d'enseignement, il y a suffisamment d'ordinateurs ayant des équipements permettant l'accès à l'internet par l'entremise de matériels/logiciels adaptatifs pour répondre aux besoins des étudiants ayant des incapacités
4. ___ Dans mon établissement d'enseignement, le soutien technique offert aux étudiants qui utilisent les technologies informatiques adaptatives répond aux besoins des étudiants ayant des incapacités
5. ___ La disponibilité des technologies informatiques adaptatives des laboratoires/centres spécialisés réservés aux étudiants ayant des incapacités de mon établissement d'enseignement répond à leur besoins
6. ___ Les formations offertes par mon établissement d'enseignement en ce qui a trait aux technologies informatiques adaptatives pour les étudiants ayant des incapacités répondent à leurs besoins

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7. ___ Dans mon établissement d'enseignement, l'espace disponible pour les technologies informatiques adaptatives répond aux besoins des étudiants ayant des incapacités
8. ___ Je suis (mon service/bureau est) consulté lors de décisions importantes concernant les parcs informatiques (ex., achat de logiciels pour l'ensemble de l'établissement d'enseignement, design de pages web, ajout ou amélioration des laboratoires informatiques)
9. ___ Mon établissement d'enseignement a un comité aviseur/consultatif qui s'occupe de l'accessibilité des technologies informatiques destinées aux étudiants ayant des incapacités
10. ___ Les cadres supérieurs réagissent positivement lorsque je les approche avec des problèmes relatifs à l'accessibilité des ordinateurs du campus destinés aux étudiants ayant des incapacités
11. ___ Le personnel qui s'occupe des technologies informatiques courantes sur le campus a l'expertise pour prendre soin des technologies informatiques adaptatives

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12. ___ Le financement des technologies informatiques et/ou technologies informatiques adaptatives pour mon établissement d'enseignement (de mon établissement d'enseignement, de programmes, d'agences, de fondations, de compagnies) répond aux besoins des étudiants ayant des incapacités
13. ___ La disponibilité des technologies informatiques adaptatives dans les laboratoires informatiques courants de mon établissement d'enseignement répond aux besoins des étudiants ayant des incapacités
14. ___ L'accessibilité du matériel de cours informatisé utilisé par les enseignants (ex., logiciels de mathématiques, cédéroms, pages web) répond aux besoins des étudiants ayant des incapacités
15. ___ L'accessibilité des ordinateurs des bibliothèques (ex., répertoires, bases de données informatisés, cédéroms) répond aux besoins des étudiants ayant des incapacités
16. ___ La question d'accessibilité est incluse dans la formation du corps professoral sur l'utilisation des technologies informatiques dans leurs cours

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17. ___ Il y a des occasions pour les employés de mon établissement d'enseignement d'acquérir des connaissances sur les technologies informatiques adaptatives
18. ___ Il y a une personne à mon établissement d'enseignement qui a l'expertise en matière de technologies informatiques adaptatives (c'est-à-dire, quelqu'un ayant des connaissances informatiques, qui est toujours au courant des nouveaux produits, qui est en mesure de régler les problèmes d'équipements matériels et de logiciels)
19. ___ J'ai des connaissances sur les technologies informatiques adaptatives (ex., logiciel d'agrandissement d'écran, souris adaptée)

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20. ___ J'ai l'impression que les centres de réadaptation, programmes, agences ou compagnies qui fournissent des technologies informatiques et/ou technologies informatiques adaptatives aux étudiants ayant des incapacités offrent des équipements matériels/logiciels adéquats
21. ___ J'ai l'impression que les étudiants ayant des incapacités ont reçu la formation adéquate pour utiliser les technologies informatiques et/ou technologies informatiques adaptatives des centres de réadaptation, programmes, agences, compagnies, etc.

_____ **TOTAL DE L'ÉCHELLE** La moyenne des questions 1 à 21

Échelles Secondaires

_____ **Calcul de l'accessibilité à l'informatique adaptative** La moyenne des questions 1, 2, 3, 4, 5 et 6
_____ **Calcul de l'infrastructure et de la collaboration** La moyenne des questions 7, 8, 9, 10 et 11
_____ **Calcul de l'inclusion éducative** La moyenne des questions 12, 13, 14, 15 et 16
_____ **Calcul de la compétence en informatique adaptative** La moyenne des questions 17, 18 et 19
_____ **Calcul du soutien par le secteur de la réhabilitation** La moyenne des questions 20 et 21

Citation : Fossey, M.E., Fichten, C.F., Robillard, C., & Asuncion, J. (2001). **Accessibilité des technologies au campus: échelle des services pour étudiants handicapés V.1.** (Échelle). Disponible le 20 Août, 2001 en Français au : http://www.adaptech.org/pubs/accdssf.doc, ou http://www.adaptech.org/pubs/accdssf.pdf, ou http://www.adaptech.org/pubs/accdssf.txt

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